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# STUDY PROJECT

KOREAN WAR LOGISTICS  
EIGHTH UNITED STATES ARMY

BY

LIEUTENANT COLONEL LEROY ZIMMERMAN, FA

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(1) the Pusan Breakout, (2) advance to and beyond Pyongyang, and (3) CCF intervention and the retrograde operation. The logistical situation fluctuated from adequate during the breakout, to insufficient during the push northward, to abundant before the CCF intervention, to excess during the retrograde operation. Some of the systemic problems encountered were: (1) shortage of personnel and inadequately trained personnel in combat service support units; (2) inadequate and often a lack of wartime policies for supporting units; and (3) improper command and control responsibility alignment of support to supported units. Numerous lessons were learned during this period. Some are still germane to today's preparation for war: (1) logisticians must be integrally involved in the early planning of tactics and logistics; (2) adequate medical support must be provided early in the engagement - inclusive of personnel, supplies and facilities; and (3) unit readiness must be sustained at a go-to-war level, particularly in CS and CSS units.

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USAWC MILITARY STUDIES PROGRAM PAPER

KOREAN WAR LOGISTICS

EIGHTH UNITED STATES ARMY

19 SEPTEMBER 1950 TO 31 DECEMBER 1950

AN INDIVIDUAL PROJECT

BY

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Project Advisor

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## ABSTRACT

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The Eighth US Army participated in three major operations of the Korean Conflict during the period 19 September - 31 December 1950. The provision of logistical support was frequently affected by the tactical situation; and vice versa, the logistical situation, at times, had impact on the tactical situation. Both aspects were addressed in this study. In addition, command and control, organizational structure and outside factors were investigated to establish their impact on logistical support. The three major operations include (1) the Pusan Breakout, (2) advance to and beyond Pyongyang, and (3) CCF intervention and the retrograde operation. The logistical situation fluctuated from adequate during the breakout, to insufficient during the push northward, to abundant before the CCF intervention, to excess during the retrograde operation. Some of the systemic problems encountered were: (1) shortage of personnel and inadequately trained personnel in combat service support units; (2) inadequate and often a lack of wartime policies for supporting units; and (3) improper command and responsibility alignment of support to supported units. Numerous lessons were learned during this period. Some are still germane to today's preparation for war: (1) logisticians must be integrally involved in the early planning of tactics and logistics; (2) adequate medical support must be provided early in the engagement - inclusive of personnel, supplies and facilities; (3) unit readiness must be sustained at a go-to-war level, particularly in CS and CSS units.

# PREFACE

This study project was produced under the aegis of the US Army Military History Institute and the US Army War College. The scope and general methodology were outlined by the Institute. This study is designed to be part of the total study effort: KOREAN WAR LOGISTICS: US FORCES. The outstanding assistance received from personnel at the Institute greatly enhanced the research effort of this study. Special thanks to Dr. Edward J. Drea, USAWC Project Advisor, for the assistance and advice provided.

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## CHAPTER I

### BACKGROUND

Headquarters, Eighth United States Army and its subordinate units were located in Japan under the Far East Command (FEC) at the outbreak of the Korean War on 25 June 1950. The first eighteen days of warfare were the beginning of many more very taxing planning and implementation exercises for the Eighth Army and subordinate unit staffs, maneuver units and logistical units.

The 24th Infantry Division deployed to Korea on 1 July 1950. In order to deploy the 24th Division, supply activities had to work around the clock to ensure all Tables of Organization and Equipment (TO&E) authorized equipment and the requisite stockage levels of various classes of supply were available.

Following the deployment of the 24th Division, activity within the FEC Headquarters and Eighth Army Headquarters became even more intense. On 4 July 1950, in a joint session of Eighth Army and FEC logisticians, the FEC G-4 decided that Eighth Army would be responsible for all logistical support for forces in Korea, except air and water transport which remained the responsibility of the Japan Logistics Command (JLCOM). In addition, it would establish a base section in Korea and maintain a minimum of a 45-day reserve of supplies in Japan, later to be increased to 120 days.[5:5]

On 5 July, the 25th Infantry Division was directed to move to Korea. With much of his combat power in Korea and the commanding General, Eighth Army, General Walton H. Walker, having logistical



responsibilities for forces in Korea, on 6 July 1950, the Commander-in-Chief, FEC, General Douglas MacArthur, notified General Walker to select a command post location in Korea and deploy to that location. On 12 July, CG, Eighth Army assumed command of all US forces in Korea.[5:8]

Although Eighth Army was not committed to combat at the outset of hostilities, its logistical network was immediately set into motion. The directive to support ground forces in Korea called for immediate utilization of stocks on hand at various depots in Japan. The depots called upon to provide supplies came from the Eighth Army assets and other depot facilities belonging to the Far East Command. The Yokohama Command and Kobe Base were intimately involved in preparing the divisional units for deployment.

When FEC alerted the divisions for deployment to Korea, there were shortages of many of the required supplies. Among the more critical arms shortages were 57 millimeter and 75 millimeter recoilless rifles and 4.2 inch mortars. These weapons constituted the heavy weapons punch immediately available and organic to the infantry units. In the hurried effort to fill shortages, established supply procedures were often ignored. This resulted in the issue of supplies without requisitions and a loss of accountability. This method of issuing supplies also allowed unauthorized stockage levels and receipt of supplies and equipment units were not authorized by TO&E or other regulations. In addition, this became a "first-come-first-served" supply system. Once the divisions deployed, Eighth Army had to go through a major accounting and inventory to reestablish accountability and supply procedures.

In preparation for the deployment of the divisions to Korea, the Logistical Plan for Eighth Army divisions was published by the G-4,

Eighth Army. The plan specified the following:

1. Units transported by air would carry a basic load of ammunition and a three-day supply of rations.
2. Units moving by water would take two basic loads of ammunition and a 15-day supply of Classes I, II, III, and IV supplies. A 5-day supply would be in the hands of the troop units and a 10-day supply in the division trains.
3. Combat accounting of supplies would be placed in effect upon movement alert.
4. The Eighth Army would provide automatic resupply of all classes of supplies to the units in fifteen days.
5. Wounded personnel would be evacuated initially to the 118th Station Hospital at Fukuoka, Japan, with the seriously wounded being transported by air when planes were available.[5:IV-5]

The above plan was prepared prior to deployment of the 24th Division, the first Eighth Army unit to deploy. At the time, the planners could not know how many US units would be deployed, nor how quickly they would be alerted for departure. As a result of all the divisions deploying, along with the proportionate share of support units and personnel (the support slice) and Eighth Army Headquarters, the logisticians found it difficult to comply with points 1 and 2 of the plan. For units deploying later, combat service support personnel made an intense search to locate the required ammunition loads. The earlier deploying units had taken more than their share of ammunition and other supplies. Again this condition resulted because logisticians did not anticipate that all units would be deploying. This situation was

similar to a recent deployment of units to Grenada when the first deployed units really loaded down with ammunition.

Eighth Army was organized with four divisions, an anti-aircraft brigade and two operating bases, as shown in Figure 1. The headquarters and four divisions deployed to Korea. The deploying units were completely supported by the anti-aircraft brigade and the two operating bases with supplies, equipment, and in many cases, personnel.

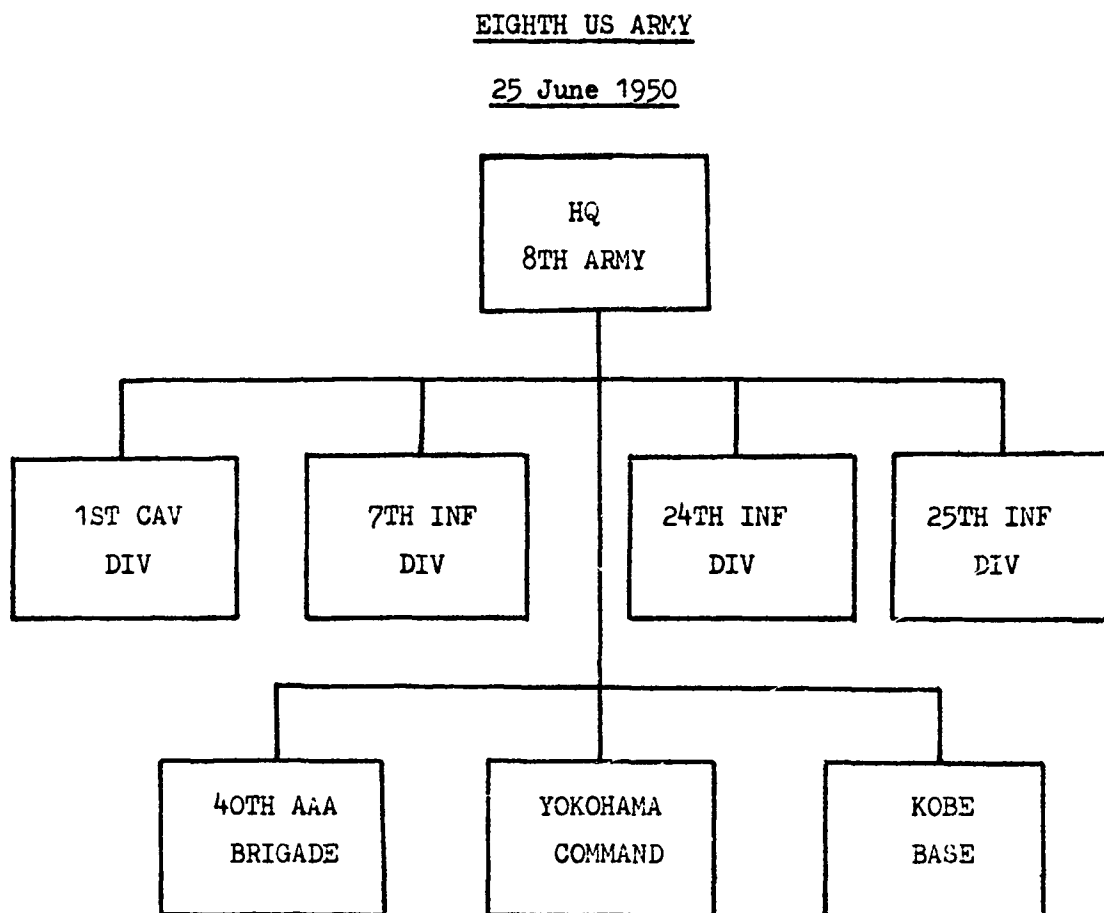


FIG 1

The major logistical support activity for Eighth Army was the 2d Logistical Command. Organized with personnel and equipment from what was formerly known as the Pusan Logistical Command, it remained in Pusan. Interestingly, the Pusan Logistical Command was a composite organization of personnel from the old Pusan Base Command, the 24th Infantry Division and hospital convalescents. The Pusan Logistical Command was activated on 13 July 1950. The 2d Logistical Command was activated on 19 September 1950, and assigned to Eighth Army as one of its major subordinate commands. [5:9,17]

HEADQUARTERS  
2ND LOGISTICAL COMMAND  
19 September 1950

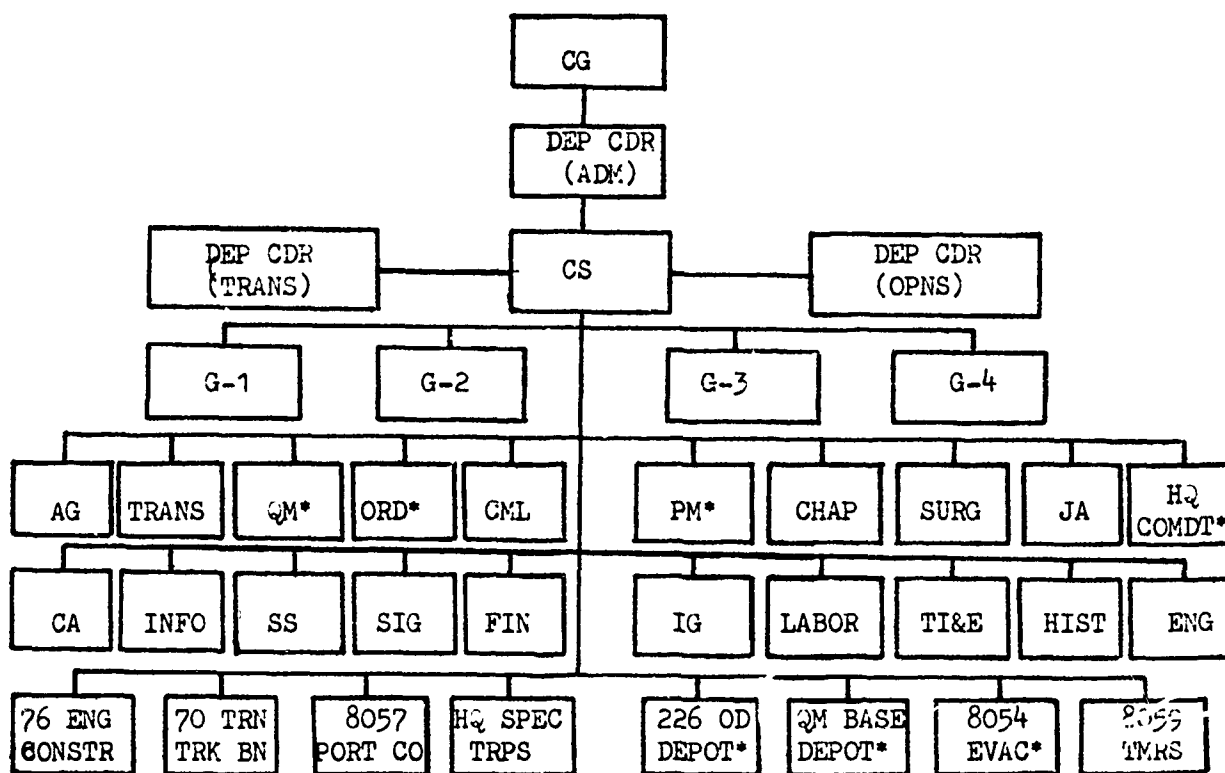


FIG 2

\*Staff sections with an asterisk indicate the staff officer was also the unit commander.

## CHAPTER II

### TACTICAL SITUATION AND LOGISTICAL IMPACT

#### EIGHTH ARMY

The Eighth Army again was dealt a logistical blow when directed to provide logistical support to all United Nations forces in Korea, including units which were under operational control of the Commander-in-Chief of United Nations Command (CINCUNC). This directive came on the heels of a previous directive to provide logistical support to X Corps. These multiple support taskings were imposed on a logistics system that was operating at far less than 100 percent efficiency. The system already suffered from a lack of properly trained personnel, equipment shortages, and personnel shortages. Meanwhile, Eighth Army's operational objective in early October was changed from defensive to offensive, as CINCUNC directed it to attack north to Pyongyang, capital city of the Democratic People's Republic of Korea (OPRK), North Korea. Simultaneously, support and supplies were being diverted to assist X Corps in its outload from Inchon and Pusan in preparation for its amphibious landing in the Wonsan area. (see map, pp. 58,59) [IV-15]

By direction of General MacArthur, ships carrying supplies for Eighth Army were diverted to outload the 1st Marine Division and the 7th Infantry Division. Consequently, Eighth Army's supplies were delayed for several weeks. As a result of the outloading, mentioned above, stockage levels of ammunition at supply points were rapidly reaching the critical state. Rations for units had dipped below the required stockage level. Some elements in I Corps were down to a one day supply of rations remaining on hand.

The shortage of supplies and support Eighth Army could provide its subordinate units caused a major change in the operations plans. Initially the plans called for both I and IX Corps to advance in the attack north. However, due to the logistical constraints, only one corps (I Corps) was sent in the attack across the river north of Pyongyang. Thus IX Corps was left south of the river, south of Pyongyang.

The tactical situation was continuously changing due to the rapid movement of units northward. A forward supply distribution point was established at Kaesong (see map, p. 59) on 19 October in an effort to maintain supplies in the forward area. However, in addition to the rapid advance, units were also widely dispersed. The disposition of supported forces required delivery of unit supplies over distances often greater than 100 miles. With only 200 trucks available, the Log Command used these trucks daily to transport food and POL. These vehicles were constantly on the go with almost always an immediate turn around. This constant usage did not allow for preventive maintenance and often delayed needed repairs and services.

The practice of establishing forward supply points in central locations to accommodate the advance of units assaulting to the north continued through October and into November 1950. However, in November, the logistical system had to adjust to reversals of the UNC advance, resulting from Communist Chinese military forces entering North Korea. Caught in a trap, the Eighth Army forces, as well as all other UN forces, had to conduct a swift retrograde operation. The bulk of supplies for Eighth Army were based in Chinnampo and Pyongyang. The problems of evacuating were even more complicated than might be

expected, because none of the units were psychologically prepared for what was happening. Panic among units caused unnecessary losses of equipment and supplies. Once the forces reached Sariwon, however, the hysteria had calmed. The major items of equipment and supplies were evacuated from both Chinnampo and Pyongyang. More equipment and supplies were destroyed than should have been, as a result of the panic and hysteria.

The tactical situation in December 1950 placed Eighth Army and other UNC units in a logistical dilemma. The first action of commanders during the withdrawal from North Korea was to destroy equipment which had to be left behind. Unfortunately that included a large quantity of engineer and ordnance heavy equipment. In an effort to minimize additional build-up of equipment, which might subsequently be destroyed to prevent it from getting into enemy hands, some shipments destined for Korea began being diverted to Japan. These conditions caused further breakdowns in what was already a deficient logistical system.

Again transportation played a major role in logistics as it did in the "breakout" and advance to Pyongyang. Transportation requirements included providing supplies forward to the northernmost units, while simultaneously evacuating excess supplies and equipment southward to minimize potential loss or damage resulting from advancing Chinese.

The technique used to withdraw forward supply points was leapfrogging in reverse. Meanwhile, trucks constantly shuttled supplies and supply operations were a combination of maintaining marginal supply levels while removing supplies from forward areas or places which might become forward areas threatened by the Chinese offensive.

The demand for trucks, in addition to movement of supplies, included the transport of troop reinforcements moving into Pyongyang. Although there is no record of the impact of maintenance on these operations, the amount of use of the limited truck assets and lack of time for maintenance continued throughout this time period. Rail assets north of the Taedong River were fully employed moving supplies to forward units, although rail facilities in this area were very limited.

Limited rail assets coupled with the overtaking of the truck fleet made it necessary to set priorities on which equipment and supplies were to be evacuated first from Pyongyang. Eighth Army was simultaneously wrestling with the evacuation of supplies and equipment from Chinnampo. This presented a unique problem because surface shipping was the only possible source of evacuation. Trucks and limited rail constituted the transportation assets from Pyongyang to the north. Those assets were also used to evacuate supplies and equipment to Chinnampo. Rail was too severely damaged and destroyed between Chinnampo and the 38th Parallel for use as a major supply transport source. The evacuation can be viewed a success because when enemy forces reached the port only small quantities of supplies and equipment had to be destroyed.[11:1-3]

Shortly after successfully evacuating supplies and equipment from Chinnampo and Pyongyang, the Eighth Army Quartermaster was faced with developing a plan for stocking the minimum number of days of supplies at supply points along the Yongdungpo-Taejon-Taegu axis toward the old Pusan perimeter. The axis chosen for supply stockage implies a "back to the Pusan Perimeter" mentality. Nevertheless, this system would optimize the use of limited time and rail assets. The selected locations with the corresponding days of supply were:



<u>Supply Point Number</u>	<u>Location</u>	<u>Number of Days Supply</u>
10	Yongdung-po	3 days, Cl I & III
11	Chonan	2 days, Cl I & III
12	Taejon	2 days, Cl I & III
13	Kumchon	3 days, Cl I & III
14	Taegu	Unlimited amt. Cl I & III

(NOTE: A day of supply equalled 100,000 rations and 175,000 gals of MOGAS and lubricants.)[11:4]

The above successive supply points (SP's) were simultaneously stocked; however, supplies would not be drawn from the succeeding supply point until the current operating supply point was closed. Following the Inchon Landing, a major supply center was established central to Inchon, Kimpo Air Base and Seoul. This supply center was operated by the 3d Logistical Command supporting X Corps. When Eighth Army and X Corps moved north, the supply operation of the 3rd Logistics Command was expanded, controlling supplies for both. Many support elements of the 2d Logistics Command were moved forward to this central location. With the consolidation of supply activities into one location for all American units, this facility was referred to as the Army Support Command (ASCOM). Supplies being evacuated from ASCOM City depot were used to stock Supply Points 10 and 11. Supply Points 12 and 13 received stocks from Pusan. Supply Point 14 was already stocked because Taegu was the Military Command Class I and III distribution point. The plan called for all Eighth Army units to be supplied from the same supply point.

Although the plan was implemented, the execution did not go as planned. Supply Point 10 at Yongdung-po was operational for eighteen days rather than the three days for which it was stocked. Supplies

therefore had to be shifted from Supply Points 11, 12, and 13 to fill SP 10's requisitions. All the stocks from SP's 11 and 12 were shipped to SP 10 and issued before the resupply train arrived at Yongdung-po from Pusan. The rapid and complete consumption of stocks from SP's 11 and 12 meant those now had to be resupplied. Transport assets were not readily available for shifting supplies between SP's, nor providing supplies from Pusan. The shorter distance to move supplies was from SP's 11 and 12 to SP 10. Supplies were also scarce at Pusan for replenishing SP's 11 and 12. Had the retrograde operation moved more quickly, the nonavailability of supplies at SP 11 would have had a detrimental affect on the operation. Supply Point 10 was operational until 2 January 1951, at which time SP 11 was opened.[11:5]

#### 2D LOGISTICS COMMAND

As the 2d Logistics Command was being organized, its commander, Brigadier General Paul F. Yount, envisioned that his unit would be responsible for direct logistical support for Eighth Army. That meant the 2d Logistics Command would be the primary agency for placing requisitions upon the Japan Logistical Command. Although the 2d Logistics Command was to be the principal requisitioning agency for Eighth Army, control was retained by Eighth Army in the technical service sections for approximately six months. The rationale for this action was there had not been sufficient time for experience factors to develop for use as a basis for determining requirements. The headquarters therefore retained control of all logistical support except port operations.[5:18] The consequences of this action were fivefold. First, the 2d Logistics Command would be receiving and delivering

supplies over which they did not have control. Second, the supply accountants and the supply controllers were in different organizations, thus setting the stage for supply accountability disconnects. Third, splitting these functions separated the command and control for supply operations. Fourth, subordinate organizations had no single point of contact for supply actions or supply disconnects. Fifth, the 2d Logistics Command now perceived itself as merely supply handlers rather than logistics operators.

The 2d Logistics Command was organized based on the fluctuating numbers of units it serviced. However, the subordinate units of the 2d Logistics Command were not designed to accommodate all the different type units assigned to Eighth Army and the Logistics Command. Other challenges facing the command included having personnel assigned to subordinate units in a temporary duty status from other outside organizations.

The newly activated command, like its predecessor, the Pusan Base Command, participated in three different supply lines - one for the US and other UNC forces, a second for the British Commonwealth, and the third for ROK units.[7:70] Costs for equipment, ammunition, and other supplies were to be reimbursed by the other nations to the United States. Eighth Army was tasked to report items provided to other UNC units with hopes of being reimbursed. Much of this accounting was being done by the Logistics Command using personnel much needed for other tasks. Throughout this period, however, reimbursement funds were never received. Thus all the manpower efforts and time were in vain. Eighth Army not only lost the supplies they provided, but the manpower used in the accounting process was also nonproductive.

Efficiency of the logistics organization was further hampered by low morale, inadequate opportunities for promotion, and nonavailability of adequate qualified personnel. Additional strains were placed on the Logistics Command when it was given the requirement to support operations of the X Corps. With no "lead time" to build up additional stockage, the available stockpile was quickly consumed, creating critical shortages for subsequent Eighth Army operations.[5:20]

The Logistics Command was stretched beyond its limits in December 1950, after the Communist Chinese military forces entered the conflict, forcing the UNC withdrawal from North Korea. Supplies from the North Korea's evacuation plus those from the United States and Japan arrived at Pusan, overtaxing the port. Much of this volume was the result of not being able to unload ships as scheduled at the northern parts of South Korea. During this same period, the 3d Logistics Command, which was supporting X Corps, was relocated from Inchon to Pusan. It assumed some of the missions of the 2d Logistics Command; for example, construction and operation of POW enclosures and logistics support to some units assigned and attached to the 2d Logistics Command. This made it possible for 2d Logistics Command to set up subdepots in forward areas of the combat zone and now serve as the single requisitioning agency for Eighth Army.[5:21]

#### OPERATION CHROMITE

Operation CHROMITE began 15 September 1950. Eighth Army's objective in the operation was to break out of the Pusan perimeter and, with all available ground, naval and air forces, destroy the North

Korean Peoples' Army (NKPA) south of the Inchon-Seoul-Ulchin line. The Eighth Army objective was complemented by the Inchon landing of the US X Corps, whose objective was to seize Inchon, Seoul and Kimpo Airfield, and sever North Korea's communications and supply lines.[5:IV-14]

The X Corps, having received priority for supplies and support, caused Eighth Army to be adversely affected in its capability to meet its objectives. Supplies were short and equipment was in poor to non-operational states of repair. CG, Eighth Army was further encumbered when directed to continue supplying his unit and supply and support the 1st Cavalry, which was far forward, and support the X Corps.

Recall that the 2d Logistics Command was assigned to Eighth Army. Also recall the instances previously mentioned where the 2d Logistics Command was directed to supply the X Corps after its landing in Inchon and its subsequent moves to link with Eighth Army in the march to Pyongyang. On both occasions, the impact was severely felt by the units of Eighth Army.

On 8 October, after the conclusion of the 2 October phase of the operation, the 2d Logistics Command received another directive to supply the X Corps. Again the directive came with no prior warning, so there was no time to build-up stocks to support 75,000 additional troops. The supply levels directed were 15-day supply of all classes of supply for 25,000 troops, a 10-day supply of Classes II and IV for 25,000 troops and a 15-day resupply for the entire X Corps to be furnished 8 days hence. Problems for the 2d Logistics Command were further compounded by the inability of X Corps to determine its requirements. For the third time, Eighth Army units experienced depletion of their supplies and traumatic delays in filling requisitions.

Other areas contributing to the complexity of the problem included: (1) the requisitioning procedure for X Corps, (2) delivery procedures, and (3) the geography. The X Corps submitted its requisition directly to the 2d Logistics Command; however, X Corps requested certain items for delivery directly from the Japan Logistics Command by airlift. Later X Corps received permission from the Commander-in-Chief, Far East Command, to requisition Classes II and IV directly from JLCOM. In an effort to meet the X Corps demands, 2d Logistics Command diverted ships to X Corps without full knowledge of all supplies on board. This resulted in partial loads received by X Corps and Eighth Army. This drove X Corps to request permission to request Class I supplies directly from JLCOM. The third factor was the distance between the supply depots and the X Corps. The 2d Logistics Command's truck assets were less than adequate - both in quantity and maintainability. Thus delaying, and sometimes not making, deliveries. Supplies of Classes I and V and wet-cold weather equipment were the most critical shortages experienced during this period.[5:IV-16 to 19] Giving X Corps permission to request direct from JLCOM while 2d Logistics Command was providing automatic resupply, totally disrupted the supply system. The 2d Logistics Command and Eighth Army were given formidable tasks of supplying and supporting X Corps without being given the additional personnel and transport to accomplish the tasks. Allowing X Corps to requisition direct without relieving 2d Logistics Command violated the supply principles providing for supply efficiency and economy, as well as, command-supply linkage.

## LOGISTICS ORGANIZATIONS

Late September and October 1950 was the time for logistical shifts of supplies and reassigning of organizations as a result of the tactical situation. The arrival of new units contributed to the need to reassign some units. Many of the general support units, such as the 899th QM Laundry Company, the 529th QM Petroleum Supply Company, and the 4th Petroleum, arrived in Korea in early October and were assigned to the Pusan Depot Command. This is the first indication of complete support units arriving that actually had specialized and trained logistics personnel throughout the organization. These arrivals and the tactical situation caused the following units to be reassigned from X Corps to Eighth Army on 10 October 1950:

<u>UNITS</u>	<u>TO&amp;E</u>
6th QM Gp, HQ & HQ DET	10-536
6th Petrl Prod Lab (Mbl)	10-500
20th QM Subs Sup Co	10-197
130th QM Bkry Co (Mbl)	10-147
506th QM Petrl Sup Co (Mbl)	10-77
527th QM Svc Co	10-67
537th QM Ldry Co (Smb1)	10-167
549th QM Ldry Co (Smb1)	10-167
560th Comp Svc Co	10-500

Six days later, the 564th QM Clothing and General Support Depot Company was established in Japan with the company headquarters and one platoon assigned to the 2d Logistics Command.[10:9,10] The efficiency level of

supply operations greatly improved as a result of having trained soldiers to accomplish the tasks these units performed.

Quartermaster units assigned to Eighth Army in October as units moved northward experienced a reassignment process in December as the tactical retrograde operation unfolded. Units were reassigned to the Pusan Depot because they were physically returning to Pusan. Units relocating from Seoul, Inchon and Pyongyang and reassigned to the depot included:

<u>UNITS</u>	<u>TO&amp;E</u>
6th QM Gp	10-22
6th QM Petrl Prod Lab	10-500
130th QM Bkry Co (Mbl)	10-147
527th QM Svc Co	10-67
537th QM Ldry Co (Smb1)	10-167

In addition to reassignment, the 23d QM Gp HQ and the 54th and 96th QM Battalions were activated by Eighth Army on 11 December 1950. The mission of the 23d QM Gp was to be prepared to take over the quartermaster mission if required.[11:7]

The 15th Quartermaster Company, 1st Cavalry Division, was the division's supply activity. In September 1950, the Class I and III distribution points were established at Chongju. The company headquarters was located at Taegu. As the division advanced northward to linkup with the 7th Infantry Division, Classes I and III distribution points were set up to support the advance. On 29 September, another distribution point was established at Ansong. The company headquarters subsequently displaced to Suwon.[13:147]



With the onset of colder weather, the company had received, through Eighth Army, sufficient winter underwear, M43 jackets, and gloves to supply all units. Due to the rapidity of the advance, the issuance of these supplies did not take place until 9 October. Movement north of the 38th Parallel was swift and much less deliberate than the Pusan Perimeter breakout up to the 38th Parallel. Much of the resupply then had to come by air. The air resupply was impromptu, rather than preplanned. It was a necessity to aerially support units moving northward more rapidly than ground resupply could keep up. Thus the 15th QM set up aerial dump locations. In late October 1950, one such location was established in the vicinity of Anju and in November at Pakchon. A supply of winter clothing was received at the latter location; however, the Chinese soon afterwards overran the position. The gear left behind included a thousand sleeping bags, two or three kitchens, mess gear, and bundles of winter clothing. The bulk of the division's winter clothing, however, remained in the warehouses in the south at Taegu - over 400 miles away.[13:148] The rapid establishment and disestablishment of supply points continued through the 4th of December 1950. During the withdrawal from Pyongyang, supply procedures deteriorated even more than they had during the advance north of the 38th Parallel. Supplies, which could not be hauled, were being given away or abandoned.

The 3d Transportation Amphibian Truck Company, formerly designated the 8062d, was very active during the Pusan Perimeter breakout. The company, equipped with trucks, LST's, and DUKW's, assisted the 2d Infantry Division by transporting assault elements across the Naktong

River. Subsequent to carrying three battalions of the 23d Infantry across, they continued by ferrying supplies. A platoon of the 3d TAT lashed a section of ponton bridge between two DUKW's and transported 138 tanks across the river.[13:58,59]

## CHAPTER III

### SUPPLY OPERATIONS BY CLASS

#### CLASS I

Rations used consisted primarily of three types: A, B, and C. The preferences of the soldiers were A and C rations. However, the logistical system could best support B and C rations. When B rations had to be used, they were often supplemented with fresh items that were available locally.

During the fury of the Pusan Perimeter breakout and the Inchon Landing, the main effort was to provide supplies where needed, as quickly as possible. The impact of this philosophy on rations was a discontinuance of orderly ration distribution and maintaining rations in shipment quantity packaging. Following the Inchon landing and the Pusan Perimeter breakout, efforts to repackage subsistence broken out for distribution received a lot of command attention because resupply of rations was most critical to the success of the operation. The rations had been taken from shipment containers and distributed loosely, now repackaging was necessary for accountability and handling purposes. Both had become questionable--ability to handle the loose rations and accountability of an excessively large quantity of rations. All logistics commands from division level up to Japan Logistics Command became involved in the repackaging, accountability and distribution of Class I items.

As the units began achieving tactical successes, local commands began giving as many incentives as they could find. Among those was the

gratuitous issue of PX rations to forward troops once each week. As part of this issue, beer was supplied on the basis of one can per man per day. That practice was disapproved by Department of the Army; however, it was resumed with beer being paid for out of nonappropriated funds. [10:12,13]

The bakery operations, although not assigned to Eighth Army, provided significant services to its tactical and support units. Bakery products were provided by the 8077th Quartermaster Bakery Company, operating a fixed bakery, and the 108th Quartermaster Bakery Company, operating mobile facilities.

The wide dispersal of tactical units in mid-October caused a decline in the quantity of fresh bread available for the troops. The distances were too great and assets insufficient to make the deliveries. This decline in required production led to the storage of equipment from the mobile facilities and utilization of those personnel in the fixed bakery. Toward the end of October, the requirement for fresh bread returned to its previous level. Therefore, the 108th's personnel and equipment were relocated to Inchon in order to provide fresh bread to the frontline troops.

As part of the withdrawal and diverting of supplies to prevent its capture by the Communist Chinese in North Korea, many shipments of Class I supplies originally planned for forces in Korea were consequently diverted to Japan. The diverted shipments caused a drastic increase in requirements and requisitions for perishables and other Class I supplies in Korea. An additional ship was placed en route to deliver the requisite supplies; however, that was still insufficient to meet the operational units' requirements. Winter was beginning to set in, thus

the insufficient quantity of Class I supplies coupled with the dropping temperatures caused morale to become a considerable leadership challenge.

In November 1950, troops were given a caloric supplement to the "B" rations to help combat the subzero temperatures. Items added included candy, margarine, bacon, dried beans, and wheat cereal. Coffee rations were also increased. In December, however, the rations decreased to their previous issue levels when the battle and troops moved back to the southern part of the peninsula.[5:IV-44]

To accommodate the rapidly changing tactical situation, the Eighth Army Quartermaster developed a new ration distribution plan. Rather than filling a train car with one or two items from the "B" rations, the new plan called for loading each car with approximately 12,000 balanced "B" rations. The rationale for the new plan included:

- (1) If train cars became separated, upon arrival at the destination, the receiving unit would still have complete meals.

- (2) Any combination of 15 cars could be used to make up a ration train.

- (3) If any cars arrived in a piecemeal fashion, again the receiving unit would have complete meals.

Shortly after implementation the plan was abandoned. The plan could not work because the depot had neither the time nor personnel to accomplish this type ration breakdown and distribution packaging. The problems of executing this plan were further aggravated by inclement weather causing extensive absenteeism among the indigenous labor force. The depot experienced entire labor gangs failing to report for work

whenever it was raining or cold. Even after resorting to using POW's, it was still too time consuming to carry out the plan.[11:12]

The Eighth Army G-4 had a good idea when he developed the plan; however, his failure to consider the time and personnel requirements for implementation led to its failure. This illustrates the potential disasters which occur when the logistical planner is in one organization while those executing the plan are in another organization and no prior consultation takes place.

The POW's under the United Nation Command's control numbered approximately 138,000 by December 1950. The ROKA supply system could no longer meet the POW's ration demands. The per person issue for POW's was down to 3 hops of grain per day instead of the authorized 5.5 hops. One hop equals 4.9 ounces of polished rice. The POW death rate and cases of beriberi were on the rise. The 2d Logistics Command assumed the ration responsibility for the POW's. The 55th Quartermaster Base Depot issued approximately 3,000 tons of rice and 750,000 pounds of fish to POW camps in December. Other issues of rations to POW's were as listed on the next page:

<u>ITEMS*</u>	<u>QUANTITIES</u>	<u>ISSUE PER 500 POW's</u>
Dry Fish	11,260 lbs	50.6 lbs
Soybean Sauce	10,000 lbs	60.0 hops
Cabbage	49,800 lbs	249.3 lbs
Radishes	41,500 lbs	104.4 lbs
Onions	2,490 lbs	12.3 lbs
Kimchi	2,075 lbs	10.2 lbs
Fresh Fish	2,000 pieces	10.0 pieces
Bean Curd	8,000 pieces	42.8 pieces
Bean Sprouts	200 kg	1 kg
Round Onions	3,320 lbs	16 lbs
Potatoes	6,640 lbs	32.7 lbs
Seaweed	2,000 bundles	985.0 sheets
Long Fish, Fresh	1,000 pieces	5.0 pieces
Fish, Simto Salmon	2,000 pieces	10.0 pieces
Bean Oil	600 hops	3.0 hops

\*Source. Ms, Quartermaster Supply and Services in the Korean Campaign, Chapter III, p. 12.

Providing rations for the POW's, coupled with guarding, housing and clothing them, presented numerous problems for Eighth Army and the 2d Logistics Command. Foods for POW's were not the same as provided to American units. The large quantity of POW's caused a dual ration acquisition and distribution system. Even using POW's as part of

the labor force did not alleviate the impact this imposed on the personnel availability for their normal duties. Nevertheless, these tasks were accomplished while meeting all their other requirements.

#### CLASSES II AND IV

##### Ordnance Supply

Units of Eighth Army lost significant percentages of their supplies and equipment throughout the period 15 September through 31 December 1950. For the 2d Infantry Division, much of its losses occurred at Kunu-ri. The average monthly loss or shortages, as reported for Eighth Army in December 1950, were as follows:\*

Launcher, Rocket, 3.5	895
Mortar, 81mm	188
Mortar, 4.2 inch	334
Rifle, 57mm	12
Tank, M4A3	37
Tank, M46	2
Howitzer, 105mm	20
Howitzer, 155mm	1
Tractor, M5A3	10
Machine Gun, Heavy	10
Pistol, Cal. .45	1,508
Rifle, 75mm	2

\*NOTE: Most of the large quantity items were losses.[5:IV-85]



### Quartermaster

As a result of an order to Eighth Army to supply X Corps soldiers with winter clothing, soldiers of units assigned to Eighth Army went critically short of clothing. The troops of the X Corps received wet weather and winter clothing prior to their departure from Japan. However, due to the warm climate at the time of deployment, September, many soldiers left their winter clothing behind. The X Corps was much farther north than Eighth Army at the time the order was given to Eighth Army to supply X Corps. However, Eighth Army troops moved north shortly afterwards, November 1950, and the resupply of winter clothing had not yet arrived. Extra efforts had to be made to provide clothing to the troops once the clothing arrived. Rail shipment to the forward deployed troops had stopped, therefore, supplies had to be transported via airlift. The late receipt of winter clothing was additionally delayed because Eighth Army troops moved out just ahead of the delivery of mountain sleeping bags, parkas, field coats, mittens, and shoepacks. Although late, the troops did receive their winter issue in adequate quantities for the remainder of the winter of 1950-51.[5:IV-92]

While the troops of Eighth Army were awaiting the resupply of winter clothing in the November cold, General Edward M. Almond, commanding General, X Corps, in his war diary, 1-30 November 1950, acknowledged.

In addition to the usual problems of Class I and III supply, during the month of November sufficient clothing and equipment was obtained and distributed to all units.[9:37]

The clothing and equipment to which referred was all supplied by Eighth Army, while Eighth Army soldiers went without. The shortages

experienced by the latter spanned all Class II and IV supplies. As a result of the continuous shortages of Classes II and IV quartermaster items, a program of strict economy of issue and control was mandatory. One control measurement was the establishment of QM Service Centers. The first centers were set up with one in each corps area in close proximity to the combat troops. This location served a twofold purpose: it was efficient and secondly, it was a morale booster. Each center included laundry, bath, reclamation and maintenance, and office machine repair units. Subsequently, additional service centers were established for the division, corps and Army rear troops. These facilities included bath and clothing exchange services.

While X Corps was receiving adequate supplies, Eighth Army was the victim of the shortages also being experienced by the Far East Command in Japan.

With reference to providing supplies to Korea after the Pusan Perimeter breakout, Brigadier General (later Lieutenant General) George L. Eberle, G-4, FEC, describes his situation as:

...I didn't have any trouble with people. It was because of the situation that existed at the time and difficulties of carrying out the requirements because of this lack of supplies. We supplied the Koreans through the Eighth Army.[2:56]

Note that the shortage problem was also compounded by the requirement to supply ROKA forces.

#### Laundry and Bath

Laundry services for the divisions of Eighth Army were generally provided by a laundry platoon attached to the division. For the nondivisional units, services were provided by the depot laundry unit.

The Pusan Depot laundry unit did not arrive in country until 8 October 1950 and became operational late in October. Limited personnel and equipment allowed providing services only to hospitals and depot salvage. By November and December, other activities and units began receiving laundry services.[10:22] Also at this time the Eighth Army Quartermaster initiated a program to provide all frontline units with a bath and clothing exchange system. This program attached to each corps the following--2 QM laundry platoons, 1 QM bath platoon, and 2 QM salvage sections.[11:23]

A platoon of the 549th Laundry Company provided laundry service for the 1st Cavalry Division. The capability of the platoon met and often exceeded the division's needs. Because of the tactical dispersion and rapid movement, some regiments of the division could not take advantage of the laundry service. To increase utilization, the laundry unit frequently serviced the hospitals within the vicinity of Pyongyang.

#### POW Clothing

The Eighth Army and X Corps advance north following the Pusan Perimeter breakout and the Inchon Landing produced thousands of POW's. These large numbers of POW's had a significant impact on the logistical system. The quartering of POW's carried with it the requirements for Class X clothing, bedding, and tentage. It also affected the Class I ration requirements. All the Class X clothing available was used in the POW camps. In late November and December, with the advent of colder weather, winter supplies of blankets, sleeping bags, and additional tentage was issued to the camps to ensure compliance with the rules of the Geneva Convention.[10:17]

### Graves Registration

At the time of deployment, Eighth Army lacked the trained personnel required to perform the tasks of the graves registration element. Five men each were deployed with the 24th, 25th, and 1st Cavalry Divisions to perform the graves registration functions. These 15 men were from the 108th QM Graves Registration Platoon of the Far East Command. They came with very little field experience under combat conditions and few graves registration supplies.[5:III-59] The outcome of the early engagements is evidence that five inexperienced graves registration specialists with few supplies was inadequate. Morale of soldiers was adversely affected by the units' inability to properly dispose of their comrades' remains in a timely manner. The command's thinking that the units would be deployed for a short period of time was also a probable factor in sending few personnel attached to each division - poor planning.

The 565th was the first constituted graves registration company in Korea, arriving in Pusan in mid-September 1950. The company was subdivided with two platoons attached to IX Corps for the 2d and 25th Divisions and two platoons attached to I Corps for the 24th and 1st Cavalry Divisions. The presence of the 565th filled a void. However, there were still insufficient personnel to operate rear-area cemeteries left in the wake of the divisions' advance. Until arrival of the 114th Graves Registration Company on 25 November 1950, the 565th was the only GRREG company in Korea.[1:VII-57,58]

On 9 October 1950, the 15th Quartermaster Company opened and operated a cemetery at Kaesong for the 1st Cavalry Division. This was the fifth cemetery the company had opened.[13:148]

Throughout this period, the handling of soldiers who died on the

battlefield was less than satisfactory. As pointed out above, there were insufficient personnel and those available lacked the needed experience. These problems were further compounded by the lack of policy. The logistical planners and commanders had apparently given little thought to the expected casualty level or the disposal of the remains. Consequently, the disposal of the remains was as the local logistician or commander saw fit and could accommodate. Again a shortage of supplies hampered the performance of the graves registration personnel who were available.

### CLASS III

Class III supplies were generally moved by rail as the means of resupplying forward supply points and forward airstrips. Rail shipments included tank cars carrying the bulk shipments and flatcar with 55-gallon drums carrying the packaged products. Rail transport was often supplemented by the use of trucks.

The 2d Logistics Command experienced high loss rates on OE-10, OE-30, and OE-50. These losses resulted from improperly constructed crates, insufficient dunnage and bracing, and weak metal containers used during shipment. These were not however, the only losses. Others were due to pilferage and waste. The problem was further exacerbated by the critical shortage of tank cars; thus, units frequently were not shipped the quantities of POL they requested. This combination contributed significantly to poor maintenance and even a lack of maintenance.

As a result of the problems encountered by the 2d Logistics Command, the EUSAK experienced problems in being able to maintain the authorized 30-day level of POL. Although supplies were sometimes

available, inadequate storage facilities prevented maintaining the required supply level. The command had a storage capacity to accommodate approximately 55-60 percent of a 30-day level of POL supplies. The shortage of storage capability was further compounded by how units used 55-gallon drums. Many units were using the 55-gallon drums in lieu of 5-gallon cans. Although the cans were available, 55-gallon drums were used because they were more durable, easier to inventory, less susceptible to pilferage, and reduced waste caused by spillage. Other inappropriate uses of 55-gallon drums included installing them as bridges, culverts, and reinforcements. To help reduce the unauthorized use of the drums, a policy was instituted to only issue on a drum for drum basis (issue a full drum for the turn-in of an empty drum). Money was also offered to Koreans for each drum returned.

During the retrograde phase in December 1950, the POL problems declined because stockage at forward positions was not a requirement. Minimal, usually three days, supplies were maintained at forward locations. Since units were previously stocking as much as possible toward a 30-day supply level, adequate quantities were already available in the forward positions. That which was not used and could not be transported to rear positions was destroyed. Refueling of vehicles was reversed to utilize more of the forward positioned POL. Trucks would have as little fuel as necessary to get to the forward positions; then, prior to departure to the rear, they would be refueled and fill their reserve supplies as well.

#### CLASS V: AMMUNITION

Gross ammunition shortages were experienced during the early months of the campaign, July and August 1950. In August, conditions had become chaotic. Combat units had permanently stationed personnel at the ASP depot to spot ammunition needed and to get it to the units. Finally, Eighth Army had to direct that all these personnel return to their units. Despite the early accountability problems experienced by eighth Army, 2d Logistics Command and JLCOM--two months later in October 1950--still had no published policies or procedures for requesting, securing or issuing ammunition.

At the outset of the conflict, there was no data sufficiently corresponding to the ammunition consumption rates of the units. This situation was not rectified within the first three months. For lack of better data, the 2d Logistics Command ordered ammunition for X Corps based on tables from FM 101-10, based on WWII experience. These quantities proved totally insufficient. The issue became more confused when X Corps began ordering its own ammunition to supplement that which it was already receiving. Like the previous instance when X Corps was given permission by CINCFEC to requisition Classes II and IV from JLCOM, allowing X Corps to request ammunition disrupted the system. A precedence was established which violated supply procedures. In addition, the double requisition increased the probability that some other unit would be the "bill payer" by absorbing the shortage of ammunition.

In September 1950, Eighth Army was still rationing ammunition. Rationing began in August after drastic shortages were generated by

loose to nonexistent rules on ammunition consumption. Rationing for the 81mm mortar was 15 rounds per weapon per day, 10 for the 4.2 inch mortar, and 50 rounds per tube per day for the 105mm howitzer.

Major (later Lieutenant General) Joseph M. Heiser, Jr. related an incident which illustrates the frantic effort to overcome the ammunition shortfall still being experienced in September 1950. At this time, Heiser was serving as the ammunition officer and assistant ordnance officer for the 2d Logistics Command. With total disregard for the safety requirements of separating certain types of ammunition, ships coming from CONUS and Japan were unloaded and all types of ammunition stacked together on the dock. On one occasion a boxcar loaded with grenades, while being unloaded exploded, setting off a chain reaction that completely demolished the pier. Sloppy storage, handling and organization can be credited with being at fault.[6:Sec4, p.7]

Although shortages were experienced early with ammunition, by the time of the advance to Pyongyang, sufficient ammunition was being provided to units. This was especially the case with small arms and mortar ammunition. There were, however, intervals when artillery ammunition was not on hand in sufficient quantities down at the unit level.

The US troops encountered a new element in the conflict they were not fully prepared to counter, the T-34, Russian-made tank. This provoked an emergency request for weapons to kill the tanks. General Eberle, G-4, FEC, described the urgent need for Bazookas in Korea.

...the Russians provided the North Koreans with T-34 tanks which had logistical impact on us. ...Bazookas and propellants were shipped to Tokyo and on to Korea by air. That was the first we had any of them (ammunition) delivered by air.[2:61]



During November, and especially the retrograde operation in December, sufficient ammunition was available. Ammunition received a high priority for evacuation when it became evident that not all equipment and supplies could be evacuated. Those times when ammunition could not be evacuated, commanders were instructed to destroy it along with other warfighting equipment to prevent its use by the Communist Chinese military forces.

## CHAPTER IV

### OTHER LOGISTICAL SUPPORT OPERATIONS

#### US PERSONNEL

The total strength of Eighth Army at the time hostilities commenced was 82,934. The four divisions - 1st Cavalry, 7th, 24th, and 25th - accounted for 52,525 of those.[5:IV-5] The assigned strength within Eighth Army at the start of the Pusan Perimeter breakout was 84,478. At this time, 16 September 1950, the I US Corps, activated three days earlier, had 7,475. This figure does not include the division strengths. The 1st Cavalry, 2d, 24th, and 25th Divisions had assigned strengths of 13,904, 15,191, 16,356, and 15,334, respectively.[1:547] None of the above strength figures include the elements attached to Eighth Army and its subordinate units.

As the units were preparing to deploy to Korea, all had severe personnel shortages. To fill these shortages, personnel were being provided from other units, recruits, and other countries. Units began experiencing a new set of problems. To overcome the problems being encountered with receiving different nationalities from various climates and cultures into UNC units, Eighth Army formed a United Nations Reception Center (UNRC) on 5 October 1950. The UNRC was established by the Commanding General, 2d Logistics Command, with the mission of individual and weapons training. In addition, the center clothed and equipped each receptee. The capacity of this organization was approximately 6,000 soldiers. The latter requirement to clothe and equip imposed an extra burden on the 2d Logistics Command; however, it

was necessary for the smooth transition of new soldiers into units. All UN ground units were required to go through the center, except US and British units which arrived before 5 October 1950.[1:VIII-10]

The ad hoc organization for logistical support to the Eighth Army encountered other problems in addition to the shortage of logistical personnel. The utilization of civilian employees--Korean indigenous personnel, logistical burdens created by the internment of more than 150,000 POW's and massive graves registration, created significant difficulties on the organizations in their efforts to provide logistical planning and operations support. However, the shortage of personnel was the most critical of all the problems facing the logistical command. Service support units of Eighth Army were below 30 percent strength at the time the unit was designated for deployment to Korea.[5:III-1] The personnel strength for US logistics personnel in Korea went from 8,790 in July 1950 to over 50,000 by the end of December 1950.[5: Fig 2b]

#### Personnel Casualty Prevention

Wet-Cold weather training teams were sent to each division in Eighth Army and X Corps to teach cold weather survival techniques. The teams worked feverishly from 22 September through November 1950. There is no way to accurately measure the effectiveness of such training. However, a potential indicator is a comparison to World War II, although different climates and different time periods in history. The weather casualties during the heaviest fighting--the Chinese Communist breakthrough--from 28 November to 7 December 1950, totaled 1,500. For the period 22-29 December, the total was 184. Therefore, Eighth Army

experienced a 4 percent casualty rate. However, in the winter in Europe, the casualty rate was 8 percent from severe weather.[13:173]

#### Contract Labor

The first recorded labor contract in support of Eighth Army was for stevedores at Pusan in September 1950. The contract was let to the Korean Forwarding Company with the laborers receiving a flat daily pay rate. The agreement provided for salaries of 800 won (44 cents) per man per day and 1,200 won (67 cents) per man per night.[5:III-39]. Although that was the first recorded labor contract, indigenous labor was used from the outset of the conflict. Eighth Army units were short personnel upon arrival in country; thus indigenous labor was continuously used for unloading ships, loading and unloading trucks, and other unskilled labor tasks.

#### POW Handling

The capture of POW's generated a housing and facilities problem for their confinement. The UNC commander designated the United States as the sole custodian of POW's. To comply with the provisions of the Geneva Convention of 1949, the POW's had to be fed, clothed, housed, secured and given medical care. The surge in POW population created a severe shortage of POW guard personnel. Headquarters, 2d Logistics Command made efforts to correct the shortfalls by diverting personnel to this sensitive mission and by securing ROKA personnel qualified to guard the POW's.[5:III-50]

#### Prisoners of War

In December 1950, Eighth Army was operating four POW camps in the

Pusan area. Sanitation in these contonements was marginal. The conditions primarily resulted from the nonavailability of potable water. The estimated shortage of water for daily use had risen to approximately 800,000 gallons per day for the four camps. These conditions coupled with inadequate medical and hospital care lead to over 1000 hospitalized and over 600 deaths. Hospital care to prisoners-of-war in Pusan was provided by the 3d and 14th Field Hospitals. Both facilities were augmented with South Korean Medical Corps officers, nurses, and civilian employees.[5:V-64,65]

All POW camps were overcrowded. Within the medical facilities provided for the POW's, the high mortality rate was directly attributable to lack of adequate supplies and equipment, overcrowding, and inexperienced medical personnel. Priority for medical supplies and equipment naturally went to facilities serving US sick and wounded. Likewise, the more senior and experienced doctors served in hospitals for American troops.

Efforts to employ POW's gainfully on work details could not accommodate the quantity of POW's needed to lessen the continuous overcrowded conditions. The US authorities also were sensitive to complying with terms of the Geneva Convention regarding the use of POW labor.

#### Medical

During the earlier stages of the conflict, Eighth Army was critically short Medical Corps officers, as were all other organizations. Eighth Army was authorized 318 doctors, however, there were only 156 assigned. Approximately September 1950, additional

Medical Corps officers arrived in Korea. The number of qualified doctors was still short of the required. As of 31 December 1950, Eighth Army had 472 Medical Corps officers assigned of the 536 authorized. However, less than 38 percent were specialists in professional fields.[5:V-5] The rise in the number of doctors authorized corresponds to the increase in the number of units and personnel during this same period.

The severe shortage of specialists might be considered the most critical shortage in the medical area. The lack of specialists resulted in foregoing many procedures or operations which might have been performed in-country. This dramatically increased the number of sick and wounded who had to be evacuated out of country. A significant number of casualties may have died because of the time and distance they were required to travel before they could receive adequate treatment. This shortage of specialists also caused the evacuation policy to be fewer days than desired. The desired evacuation policy was that only those who required hospitalization for more than 15 days would be evacuated to Japan or elsewhere. However, the shortage of medical personnel caused the evacuation policy to be less than 10 days. Thus, increasing the number of sick and wounded that had to be evacuated out of country. By December 1950, the number of specialists had increased. Therefore, the number requiring evacuation was decreased; thus, an increase in the number of days an individual could be hospitalized in-country, ergo, an increase in the evacuation policy.

#### Hospital Support and Evacuation

Throughout the first six months of the conflict, hospital support

was critically short. Eighth Army, along with other forces, suffered from these shortages which partially resulted from the below listed factors:

(1) The Korean Conflict was initially viewed as a "police action."

(2) An unwillingness to provide the requisite hospitals and staffs to Eighth Army from Japan or elsewhere.

(3) The attitude that casualties in excess of hospitals in Korea could receive delayed treatment in Japan.

(4) The possibility that the United Nations Forces would be pushed into the sea and destroyed, resulting in loss of hospitals and patients.[5:V-17]

By December 1950, hospital support was being provided by four mobile army surgical hospitals, three evacuation hospitals, four field hospitals, one station hospital and three hospital ships - all under operational control of Eighth Army.

Mobile Army Surgical Hospital (MASH) units supporting Eighth Army included the 8055th MASH (Provisional), the 8063d MASH (Provisional), and the 8076th MASH (Provisional). The 8055th supported the 24th and 25th Divisions. The 8063d supported the 1st Cavalry Division.[5:V-48] The arrival of these hospitals was welcomed by all units. The units deployed during the rapid movement north of the 38th Parallel in October and were all in place by early December, during the retrograde operation. The upgrade of medical care and facilities during the latter period made an unquantifiable contribution to saving lives and returning soldiers to their units earlier.

## TRANSPORTATION

Eighth Army bore the responsibility for logistical transportation during the first 2 years of the Korean Conflict. The 2d Logistics Command, assigned to Eighth Army, was the executor of all transportation with the exception of rail, which was handled by the 3d Transportation Military Railway Service. Eighth Army was involved with the transportation requirements for UN forces from the outset, even while it was in Japan before deployment to Korea. Planning for troop and equipment movements was done by the Transportation Section of Eighth Army.

Transportation was one of the most critical factors in logistical operations in Korea. The long lines of communication from port facilities to forward areas mandated the priority which had to be given to the transportation assets and requirements. Colonel (later General) Edmund C. R. Lasher was serving as the Eighth Army Transportation Officer during this period. His assessment of the status of transport described roads as being extremely poor; rail and water were the major movement avenues for key bulk freight.[8:Sec 3, Pg. 65]

As the units were rapidly making tactical advances, they began to outrun their supply facilities. Before the plan was developed and executed for the establishment of forward supply points, supplies had to be delivered via air shipments. The call for supplies was frequently made under duress without considering sound logistical thinking and practices. One resultant of such actions was the movement of supplies by rail without consideration for unloading facilities. This caused a



build up of unloaded rail cars in the forward areas; consequently,, oftentimes, critical items did not reach the units when needed. In an effort to overcome the latter problem of a unit not receiving its supplies when needed, duplicate supply deliveries were made via air, yielding a redundant system using up scarce resources and supplies.[10:17]

The EUSAK and 2d Logistics Command went to great extents to establish a logistics network to support the rapid movement of forces to the north, following the breakout from the Pusan Perimeter. The flow of supplies to the north and the establishment of intermediate supply points was painstakingly managed to guarantee success. Then in late November, the Chinese intervention caused that entire network to be dismantled and the system reversed. The UNC efforts now centered on withdrawal as rapidly as possible. Initially, the only supply points in immediate danger were those located in Sinanju and Kunu-ri (see map, p. 58). The bulk of UNC supplies, however, were located at Pyongyang and Chinnampo. Withdrawal from these locations had to be accomplished in much less time than usually needed to perform an orderly or complete evacuation of supplies and equipment. In order to continue supporting the troops, supply points moved in a reverse leapfrogging manner. Supply stockage levels had to remain slim because of the speed required for evacuation further south.

The evacuation of supplies and equipment was further compounded by the need to evacuate the wounded. Many of the transportation assets expected to be available for moving supplies were now employed for casualty evacuation as hospital trains received first priority in moving south. The second priority was troop unit evacuation.

The evacuation of the port facilities EUSAK established at Chinnampo required removal of supplies and port operating units and their equipment. Surface shipping was the means used for this task. Rail was utilized to evacuate supplies, wounded and refugees to Chinnampo; further evacuation was accomplished via water transport. There were no rail lines south of Chinnampo. All of the few trucks were used to move supplies from designated dump areas to the docks.

The next major supply points requiring first a slimdown on stockage level, followed by evacuation, were Inchon, ASCOM City, and Yongdung-po. The EUSAK G-4 had responsibility for establishing priorities for stock evacuation. By the end of December 1950, the only remaining supplies in ASCOM City consisted of engineer bridging and railroad supplies, some lumber, a limited supply of POL products and 1,000 tons of ammunition.

All supplies which could be moved quickly by truck was south of the Han River. Other supply points were moved further south with stocks of Classes I, III and V. Evacuation continued on into January 1951.[4:90-94]

#### Rail Transportation

The major supply areas for Eighth Army and all other US Forces in Korea were concentrated in Pusan. Nearly all the incoming supplies to Korea came into Pusan, because that was the location of the most modern and adequate dock facilities in Korea. The limitation of dock facilities, however, to this area placed numerous constraints on logistical operations within Korea.

The distance between Pusan and Seoul enhanced the use of rail for movement of supplies. The quantity of rail going north-south was very

limited, thus restricting the availability and flexibility of using multiple or alternate rail routes. The fact that the rail line had numerous bridges and tunnels further increased the vulnerability to enemy guerrilla attacks. The rail network available consisted of two lines running between Seoul and Pusan. One line ran north from Pusan through Taegu, Taejon and Yonddung-po; the other line ran north through Yongchon, Andong, Chechon and Wonju.[12:17] (See maps, pp. 58-61.)

During the period October thru November 1950, rail service north from Seoul was disrupted, as a result of bombing and shelling by both the US and North Korea. The bulk of resupply for US I Corps and IX Corps was supported by airlift at a rate of 1000 tons per day.[4:72]

In an effort to deny the North Koreans stored water, water towers were bombed along the route as forces withdrew into what became known as the Pusan Perimeter. However, after the breakout, measures had to be taken to provide water for locomotives traveling north from Pusan. Pumps were placed on the tenders with sufficiently long hoses to pump water from creeks at bridges along the way. This delayed the movement of supplies.[8:Sec 3, Pg 65]

Because of UNC bombing between Seoul and Pyongyang, rail was practically nonexistent. Consequently, the advance to Pyongyang in October was supplied by sea, air and trucks. Rail was available for movement of supplies and equipment from the dock at Chinnampo to Pyongyang. Movement of supplies and personnel by rail in the north was reversed--from Pyongyang to Chinnampo--during the retrograde operation in December.

### Truck Transportation

As I Corps, Eighth Army, broke out of the Pusan perimeter on 20 September 1950, supplies to the units had to be provided by trucks. The north-south rail was inoperable as a result of demolition on a bridge over the Nakdong River, thus rail operations stopped northward at Waegwan. Supplies then were hauled by truck from Waegwan to Taejon, a distance of approximately 84 miles.

Long truck hauls were required to support the IX Corps, Eighth Army during October and November 1950. The supply dumps for 2d Division were located 200 miles from the nearest railhead at Miryang. The 25th Division's supply dumps were 150 miles from the railhead at Chinju.[12:63]

### Helicopters

November 1950 was the first recorded date that helicopters were available to Eighth Army in the Korean Conflict. Helicopter units assigned to Eighth Army were placed under the operational control of the Eighth Army surgeon. The helicopters were quickly used in the transport/evacuation of the wounded and rescue of downed aircraft pilots.

### Transport of POL Products

Petroleum products coming into Korea were shipped from Japan. A sub-Area Petroleum Office in Korea (SAPOK) was set up in November 1950, under the auspices of the Petroleum Division, G-4 Section, headquarters, Eighth Army. The SAPOK had responsibility for the petroleum supply

program of all UN Forces in Korea, ROK Forces, and the civilian economy.[5:VI-41]

#### Water Transport Operations

To overcome the shortage of equipment and personnel for water transport operations, the 2d Logistics Command made requests for both from general Headquarters, Japan. Their requests were denied because neither the equipment nor personnel were available. However, requests for contract indigenous crews (Korean and Japanese) were approved. In September 1950, the first contract for 52 power barges with crews were delivered. After success with the first such contract, another was made for 120 barges with crews. However, upon arrival in Pusan, the crews were surprisingly informed that they were to travel on for operating in Inchon. Twenty-eight of the crews refused and returned to their homestation - Japan. The use of Japanese civilian crews at Inchon placed third party nationals in close proximity of hostilities.

In December 1950, the 2d Logistics Command had another troublesome encounter with Japanese labor. The command learned that some Japanese barge contractors had not been paid and they were being employed in violation of terms of the contracts. Additionally, Eighth Army had negotiated verbal contracts and crews again had not been paid. It was also discovered that crewmen had been compelled to work as stevedores and their mother ship was not permitted to return to Japan for rations. The 2d Logistics Command took immediate action to rectify the contracts, pay the crews, and apologize for crew abuse.[4:58]

The major responsibility of 2d Logistics Command in conjunction with water transportation was management and dock operations. Once the

contracts were approved for indigenous personnel as dock crews, no other problems were encountered at the Pusan docks. The next incident requiring extra involvement was the arrival of supplies at Inchon and the establishment of ASCOM City as a major forward depot operation. Again, they supplemented the operation with Korean and Japanese nationals as crewmen. Establishment and operation of the facility at Chinnampo was almost entirely with US personnel.

#### MAINTENANCE

Maintenance units and parts suppliers went to work immediately as they arrived in country. Repair of vehicles and radio equipment received priority. Trucks needed maintenance because of their high usage. Their continuous use precluded preventive maintenance and other needed maintenance which was often deferred. The maintenance of vehicles was also adversely affected by the nonavailability of repair and spare parts. Repair of radios, like vehicles, was also hampered by the nonavailability of spares. However, the maintenance personnel suspected that operating procedures and the operating environment were the causes of many failures or perceived failures. The terrain's many hills shortened the operating range for radios. When the users lost contact within what they thought was the operating range, they concluded the radio was broken, when in fact, the line of sight transmission was merely interrupted.

The weather in Korea caused the ordnance unit to develop an equipment improvement program in November 1950. Recovery units were experiencing considerable difficulty in moving disabled tracked vehicles over icy roads and frozen terrain. The 702d Ordnance Company, of the 2d

Infantry Division, developed a technique to overcome the problem. The methods used to modify the steel tracks on M4A3E8 and M32 recovery vehicles were:

(1) welding a strip of metal to the diagonal chevron on the steel track, approximately three-quarter inch thick. These strips were welded in the blocks, spaced every four to six blocks on the tracks.

(2) welding large salvage nuts on the chevron on every fifth or sixth block.

(3) welding a triangular block of steel or tooth from a sprocket to the guide cap of the center guide assembly.

(4) substituting an M46 tank track guide for a guide cap on every fourth or fifth block.[1:VII-50]

The above ad hoc improvisations proved over the winter months to be effective. The units had little experience operating in those climates, resulting in the requirement for excessive recovery operations. The recovery was soon overcome by the need for evacuating equipment from the North.

Maintenance units were very active during the withdrawal of units from the North. The 44th Ordnance Depot Company, supporting I Corps, set up in the military academy of North Korea in Pyongyang as its base of operations. Late in November 1950, the 44th was joined by the 57th Ordnance Recovery Company. The mission of the 57th was to handle recovery of tanks and to augment the recovery facilities of I Corps and its divisional ordnance units.

On 29 November 1950, the 57th deployed along the Sonchon MSR and the Sukchon Road to recover and assist disabled tanks (see map, p. 59). The 57th, once it located tanks, was assisted by the 8046th

Ordnance Field Group. The 6th and 70th Tank Battalions were the recipients of the ordnance services in their evacuation effort.[13:133] The fluidity of the battle caused a dramatic shift from normal operations. The situation just described illustrates one of many efforts made by American units in anticipation of assisting other units in a mission oriented fashion.

During November and December, the shortage of repair parts was practically negligible. The maintenance needs were present; however, the evacuation and dismantling of equipment provided more parts than needed. Maintenance units were equally as busy repairing as removing equipment from the front.



## CHAPTER V

### LESSONS LEARNED

#### LOGISTICS

Logisticians must be included, not merely consulted, in the early planning process to ensure the proper mixture of logistics units are deployed.

Discussion: Approximately two months elapsed before many of the essential service and service support units arrived in Korea. The impact of these late arrivals not only created a void in the needed support and combat capability, but also lowered soldier morale. Two types of units having significant impact very early in the conflict were field or forward hospitals and graves registration. In the case of forward hospitals, their nonavailability contributed to deaths of wounded soldiers and excessive evacuations from the combat zone. The lack of graves registration units meant units had to dispose of the remains of its soldiers who died on the battlefield. The psychological impact was reflected in the noticeable degradation of morale. Other units arriving almost two months after the initial deployment were nondivisional supply and maintenance units.

Logistical estimates of supply rates must not be made without consideration of the battlefield intelligence assessment. Particular attention must be given to the terrain analyses and enemy situation and capabilities.

Discussion: Intelligence information could have provided the

logisticians better estimates on the required supply rate of ammunition, rather than relying solely on the outdated data in FM 101-10. The terrain analyses would have provided better data for estimates on POL consumption rates. Had the POL products estimate been more accurate, the required maintenance possibly could have decreased. The insufficient supply of oil for vehicles resulted in operating vehicles while below the required oil levels, thereby creating excessive engine wear and shortening the service life expectancy of the vehicles.

#### CLASS I

The "5-in-1" ration was totally rejected by the troops. They refused on numerous occasions to eat the issued 5-in-1 rations. Due to supply levels, the 5-in-1 rations had to be force issued in order to get rid of those on hand.

Conversely, all "C" rations were fully acceptable.

The "B" rations were acceptable; however, only when "A" rations were not available.

The "A" rations received full acceptance. They were served whenever feasible, regardless of the tactical situation.[4:37,38]

#### CLASSES II AND IV

The distribution of seasonal clothing and equipment needs to be synchronized to coincide with the corresponding season. This is especially true in regions which experience dramatic climate changes, such as, a rain season, cold and hot seasons.

Discussion: Winter began setting in as the tactical units advanced into North Korea. Soldiers of both Eighth Army and X Corps were without cold-weather clothing. The clothing was, however, previously issued to

the troops. But because the weather was warm at the time of deployment, most of the troops left their cold-weather clothing and equipment issue at their home station. Frantic measures were taken to overcome the problem: clothing airlifted from Japan directly to forward areas.[10:28]

Bulk engineer supplies, such as fortification materials, bridging materials, and structural construction materials should, if at all possible, be prestocked. The urgency for such items dictates that they be available for contingencies and the reorder time is inadequate. Seasonal usage of engineer materials must also be a factor in prestockage. For example, in Korea during the monsoon season, bridging is required for crossing many areas which are easily crossed without bridging during other seasons.

Use of field expedients facilitates operations which otherwise could not be accomplished or consume valuable time.

Discussion: Two examples illustrate this during 15 September-31 December:

a. The shortage of springs and shackles for trucks was remedied by personnel of the transportation truck battalions and companies manufacturing replacements from scrap iron and other broken parts.

b. Adding three pints of alcohol to every one hundred gallons of gasoline reduced the consumption rate. Units in the forward areas successfully experimented with this method in November 1950 in order to reduce the consumption of gasoline, especially while operating tank engines to keep the vehicles warm and operable in the cold weather.[11:31]

## HOSPITAL AND EVACUATION

Medical support--hospital and personnel--in forward areas are needed within the first 30 days of warfare. Failure to have the medical facilities and personnel in a high casualty environment results in a higher death rate. A lack of adequate personnel and facilities results in second class medical practice, a lack of timely medical surgery, and less troops available for return to duty.[5:V-29]

The theatre evacuation policy, both in the combat and communication zones, must be doctrinally compatible with saving lives and returning soldiers to units.[5:V-31]

Each committed division needs a mobile surgical hospital in direct support. This principal is waiverable only after it is demonstrated that the casualty rate does not demand support by the hospital.[5:V-53]

## UNIT READINESS

Units must have on hand, at a sustained level, the equipment and personnel required to deploy to war.

Discussion: Service support units in Japan had been stripped of supply personnel (down to 25.9%) and most of the supply functions were being performed by Japanese indigenous personnel. Consequently, upon deployment, the service support units lacked trained personnel ready to perform their combat mission. Having the required personnel necessary to deploy does not mean having all the personnel needed to perform the wartime tasks. It does mean, however, maintaining a core of trained

personnel, such that when supplemented, the unit is prepared to perform its wartime tasks.

#### TRANSPORTATION

Tasks beyond unit capabilities must be addressed as soon as possible to maintain operational effectiveness.

Discussion: The area of operation, Korea, presented some unique transport problems to the operating forces. There were no conventional means among the Eighth Army units to transport supplies to frontline units located in steep and rocky areas. The logistical impact of the terrain must be included in early analyses to ensure the needed transport assets or plans are provided.

In this case, the problem was overcome by using indigenous personnel using the A-Frame to carry ammunition, rations, and other critical items over the rocky terrain. Each A-Frame carrier was able to transport 50 pounds a distance of 10 miles per day.[11:31]

The above list of lessons learned is not all inclusive. There were many others from the period 15 September-31 December 1950. The following lessons learned were discussed in an earlier military study project conducted by Colonel William J. Flanagan; however, these are very applicable to the period of this study.

Host nation support provided critically needed support for US forces.

Air resupply to forward battalions ensures effective support in heavy combat situations.

Major logistical organizations should work for the command they support in combat.[3:44-48]

## CHAPTER VI

### FUTURE APPLICATIONS

It is important in the preparation and sustainment for war that lessons from previous wars and training exercises be applied to doctrine and training. The lessons learned during the Korean Conflict are no different. This chapter will key to those lessons learned which, in the view of this author, are only partially or not at all applied to today's preparation for war.

Inclusion of the logistician in the early planning process. Particularly evident from REFORGER Exercises and division-level exercises, logisticians are not integral to the early planning process. Where they are brought in early, oftentimes tactical aspects of logistics are not completely analyzed. The logistician does not fully integrate the analyses from the battlefield intelligence assessment into development of the logistical plan. Logisticians must be tacticians and tacticians must understand logistics. This is more applicable to today's army than at any other time in history. The automation of C3I and supply activities dictates that for future successes on the battlefield, staff sections must be more functionally integrated. Including the logistician in the early planning is so vital it could mean the difference between winning and losing on today's battlefield.

Rations provided to troops must be nourishing and acceptable to the troops. Although troops were provided nourishing, acceptable meals during the Vietnam War, it is doubtful if those rations will be logistically supportable in future wars. During the 1980s the Army

found itself in the midst of developing a new combat ration. Testing has shown these rations are quantitatively inadequate for soldiers operating in a combat environment. In addition, the quantity of water needed to prepare the meals will not be available when operating in certain regions, such as the Middle East. A more recent finding with the meal-ready-to-eat (MRE) is that those eating it are not consuming sufficient liquids to sustain the anticipated combat pace. In short, food on the battlefield remains a major problem.

Provide for adequate medical support--personnel, equipment and facilities--early in the engagement. The draw down in the strength of the Army has caused a significant shifting of units and functions into the Reserve Components. As this shift takes place, it is imperative that the capability for medical care be provided. Vietnam provided an environment that the military will seldom enjoy in a future, major conflict--air superiority. Without it, the task of evacuating the wounded and dead from the battlefield becomes a challenging one. Forward medical support with adequate supplies, equipment and evacuation transport will be critical. Some speculate that the casualty level will be high on both sides for the first 15 to 20 days. Given a casualty rate comparable to any major conflict since WWII, the medical support requires early deployment. Without it will result in a repeat of the Korean War--higher than necessary death rate and a lower evacuation policy.

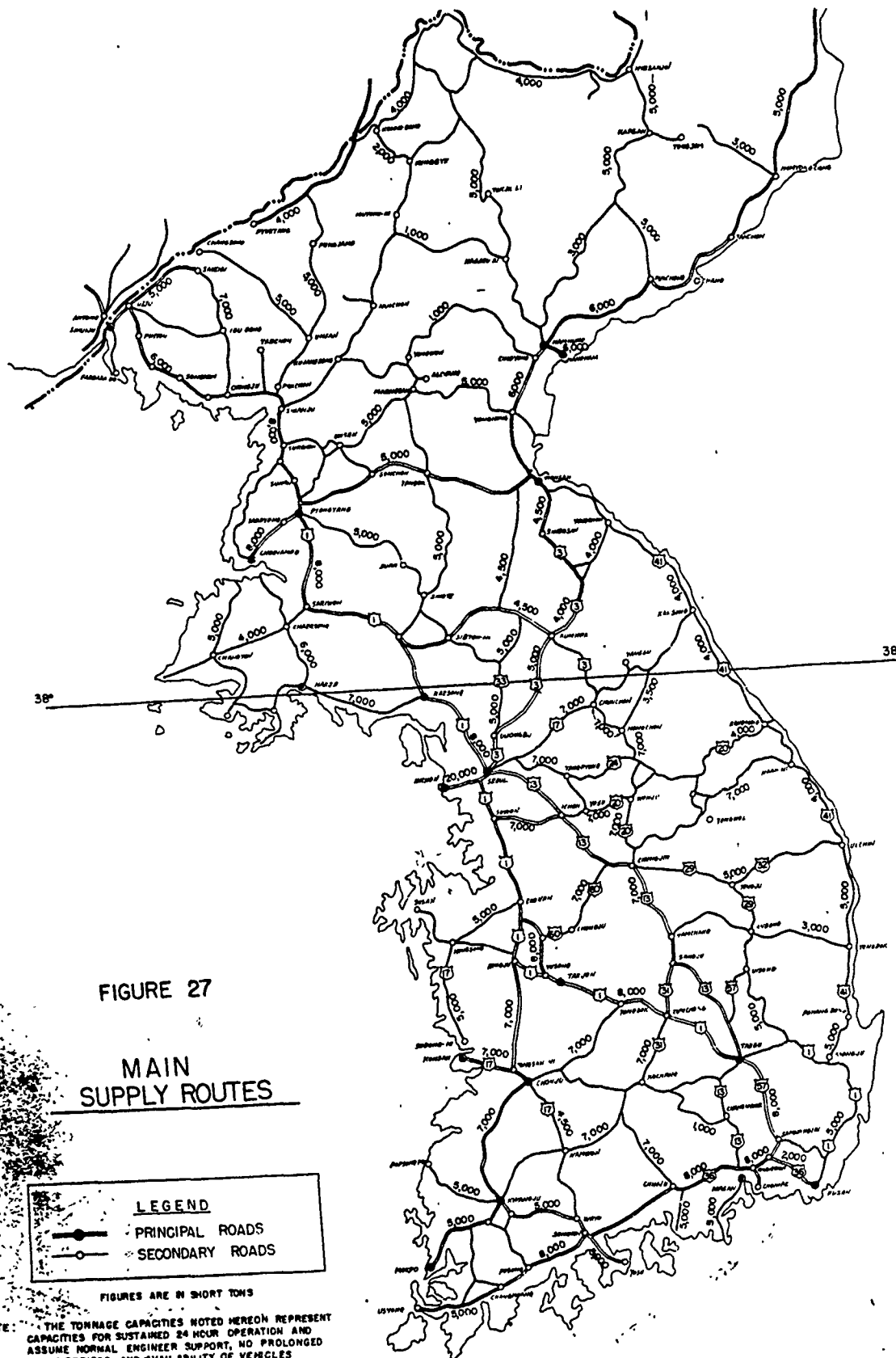
Unit readiness, particularly equipment-on-hand and training must be sustained at a go-to-war level. This factor appears to be intact with regard to active units. However, there are reservations about these requirements being met in the Reserve Component units. The issue of

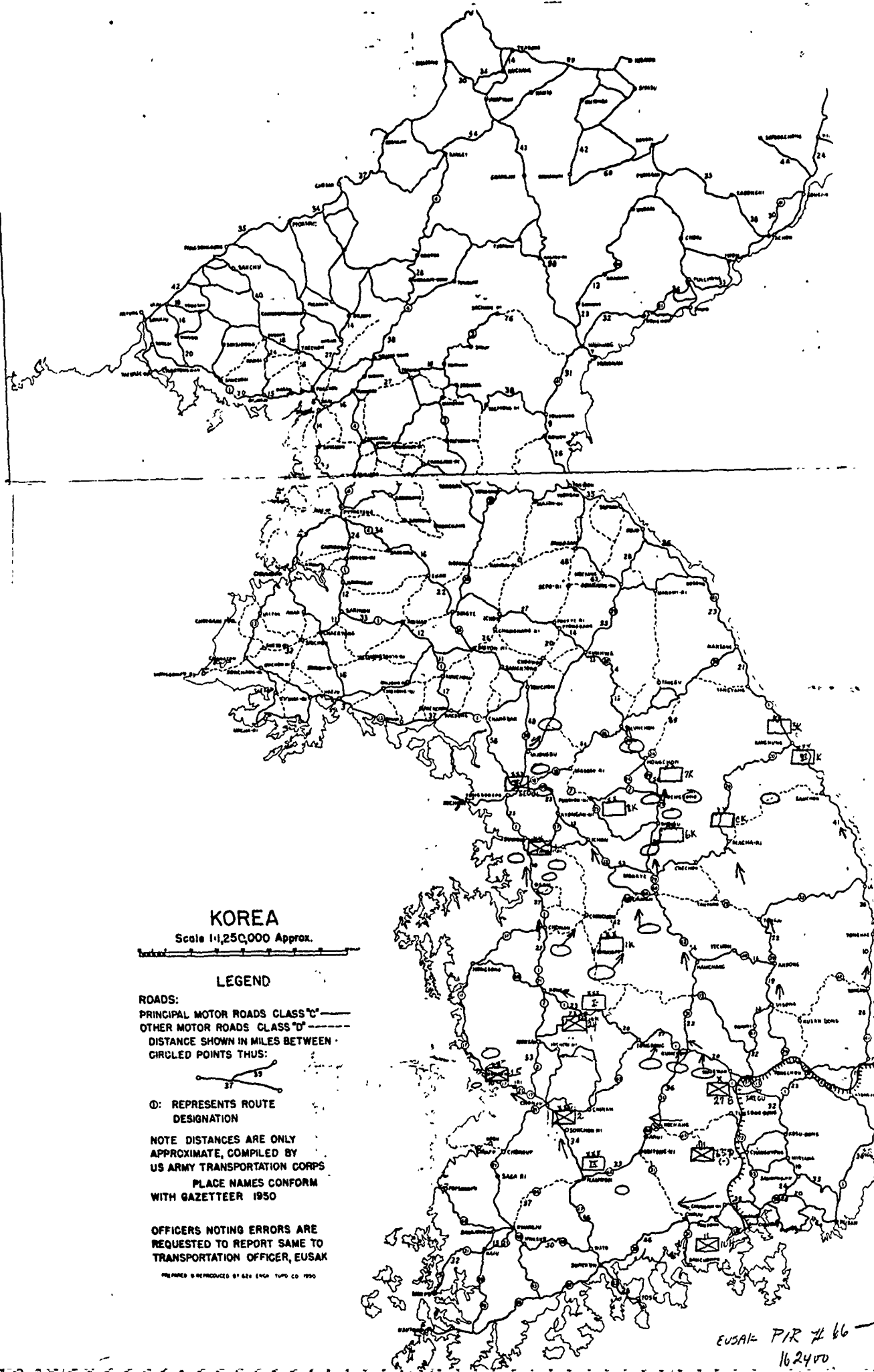


equipment-on-hand is particularly addressed to combat support (CS) and combat service support (CSS) units. The Army's logistical system has had some dynamic changes since the Vietnam Era. There are many different automated systems in use now however. Compatibility of systems and systems operators must be a major consideration when linking CS and CSS units. In addition to the compatibility linkage, it is imperative that units train together. Considering the RC ramp-up, the question which comes to mind is--can the RC absorb all the tasks placed upon it and sustain at a go-to-war readiness level.

This issue bears constant review due to the rate of equipment changes and the manpower turbulence both the active and RC are experiencing. Within the RC the manpower shortages and turnovers are primarily at the lower enlisted grades, the operators. Secondly is the question of mobilization and deployability. The no-show rate for mobilization is unknown. With the specificity of jobs, mobilization of all personnel becomes more critical. Once mobilized, the focus shifts to--is the unit prepared for deployment and can they be delivered to the war at the time and place required.

The issues raised above are considered to be the most critical, especially because of the uncertainty on numerous issues facing the military and civilian leadership during this era.





OPERABLE  
ROADS AND AERIAL PORTS  
KOREA 6 APRIL 1951

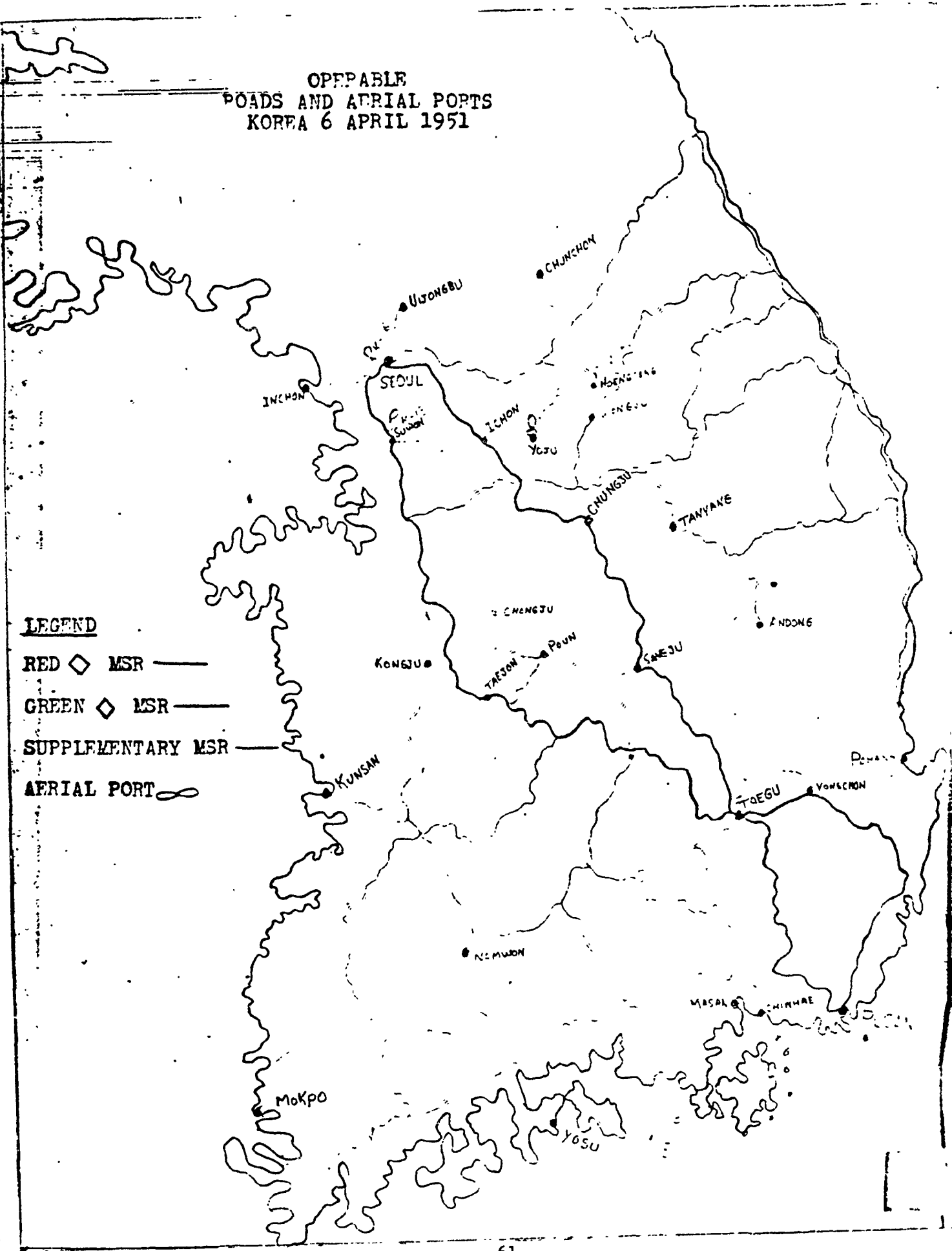
LEGEND

RED  $\diamond$  MSR —


GREEN  $\diamond$  MSR —

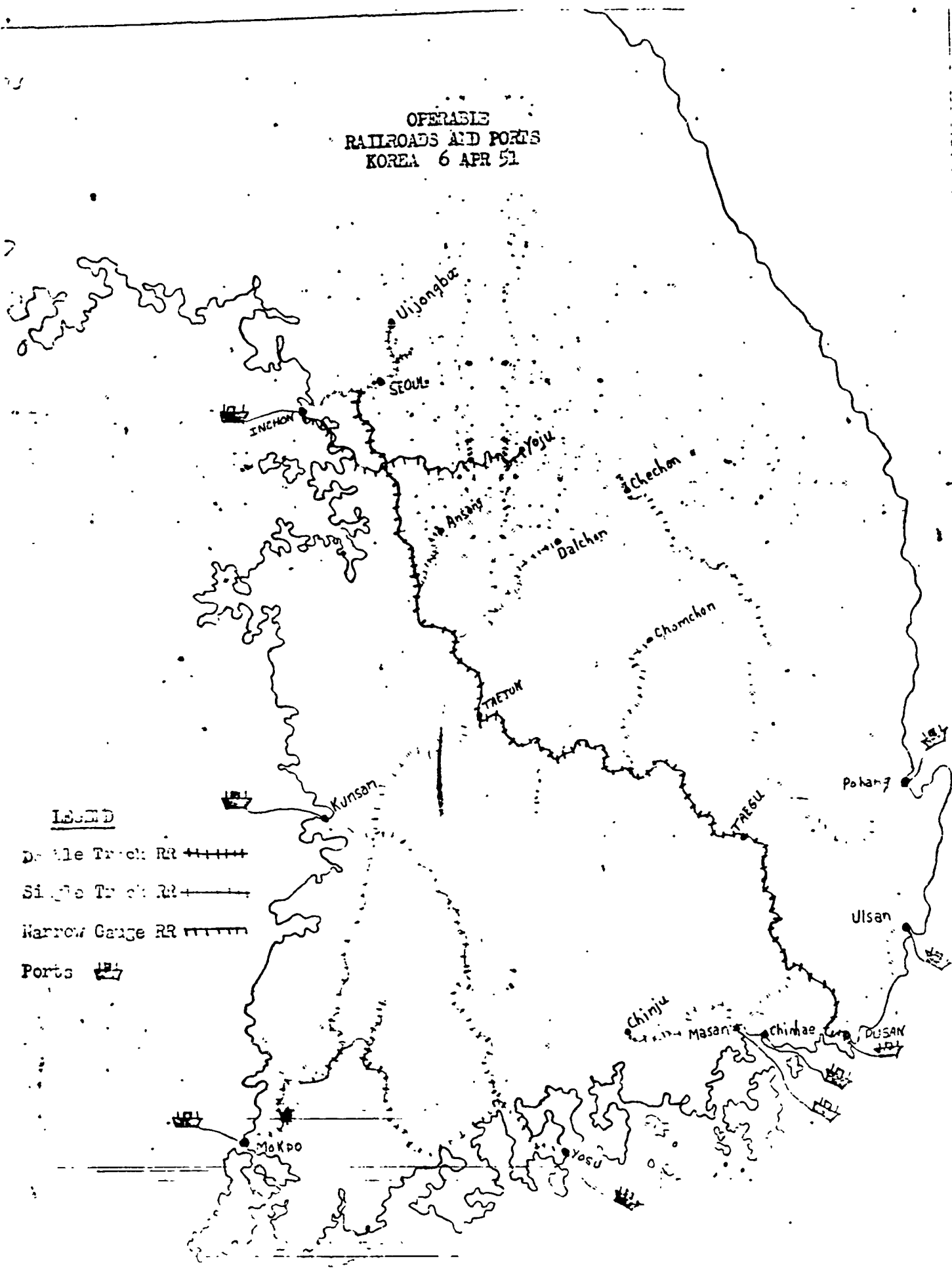
SUPPLEMENTARY MSR —

AERIAL PORT  $\infty$



OPERABLE  
RAILROADS AND PORTS  
KOREA 6 APR 51

LEGEND  
Double Track RR +++++  
Single Track RR -----  
Narrow Gauge RR - - - - -  
Ports 



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